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TITLE : IMMOBILIZED MICROORGANISM, PRODUCTION THEREOF AND TREATMENT OF WATER USING SAID IMMOBILIZED MICROORGANISM

ABSTRACT : PURPOSE: To efficiently carry out the titled treatment of water with improved characteristic stably for a long time, by using an immobilized microorganism immobilized with a metal poly(meth)acrylate gel in a specific carrier.

CONSTITUTION: A seed sludge, e.g. about 20% MLSS, etc., is mixed with 3~5wt% sodium polyacrylate and/or sodium polymethacrylate to give a mixture solution (A) consisting of 50~150g/l microbial concentration, e.g. microorganism of the genus Bacillus, etc. A structure (B), e.g. granular urethane foam having 50~95% voids, etc., is dipped in the component (A) in a volume of 1~3 times based on the structure (B) and impregnated with the component (A). The resultant structural material is then dipped in a 1~5wt% solution of a polyvalent metal salt, e.g. CaCl_2 , to gelatinize the sodium polyacrylate and/or sodium polymethacrylate, entrap and immobilize the microorganism thereby to afford the aimed immobilized microorganism (C), which is used to carry out treatment of water, e.g. waste water etc.

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